Title 195 - NEBRASKA DEPARTMENT OF ENVIRONMENTAL CONTROL

Chapter 9 - EQUIPMENT; STANDARDS, INSTALLATION

001 Any irrigation distribution system, except an open discharge system, through which chemigation is performed shall be equipped with the mechanical devices specified in paragraphs 002 through 007 of this Chapter. The equipment shall be installed in accordance with the manufacturer's specifications and at the location specified. This shall not be construed to prevent the use of portable chemigation equipment if such equipment meets the requirements set forth herein.

002 Irrigation pipeline check valve. The check valve shall be located in the pipeline between the irrigation pump and the point of chemical injection into the irrigation pipeline. Its purpose is to prevent a mixture of water and chemical from draining or siphoning back into the irrigation water source.

002.01 Existing irrigation distribution systems which, as of the date of these rules and regulations, are equipped with a properly located check valve shall be considered in compliance if the valve provides a watertight seal against reverse flow.
002.02 Irrigation distribution systems which are not equipped with a check valve or contain a check valve which after repair cannot meet the requirement in 002.01, shall be equipped with a check valve as specified in Chapter 10.
002.03 For check valves manufactured or assembled after July 1, 1987, the manufacturer of the valve assembly shall provide verification to the director that the valve model has been tested and certified by an independent laboratory as meeting the criteria specified in Appendix I.
002.04 All check valves installed on an irrigation distribution system after January 1, 1988, shall be models certified to the director as specified in 002.03 above.

003 Vacuum relief valve. The vacuum relief valve shall be located on the pipeline between the irrigation pump and the irrigation pipeline check valve. Its purpose is to prevent creation of a vacuum when the water flow stops. If the valve connection will also serve as the inspection port, the permitholder will ensure removal of the valve at the time of inspection.

004 Inspection port. The inspection port or other viewing device shall be located on the pipeline between the irrigation pump and the irrigation pipeline check valve. In many cases the vacuum relief valve connection can serve as the inspection port.

004.01 The inspection port or viewing device shall be situated in such a manner that the inlet to the low pressure drain can be observed.
004.02 A minimum four-inch diameter orifice or viewing area is required for systems without an existing port or device after January 1, 1988.

005 Low-pressure drain. The low-pressure drain shall be located on the bottom of the horizontal pipe between the irrigation pump and the irrigation pipeline check valve. Its purpose is to drain any mixture of water and chemical away from the irrigation water source.

005.01 The drain shall be constructed of corrosion resistant material or otherwise coated or protected to prevent corrosion;
005.02 The drain shall have an orifice of at least three-quarter inch diameter and shall not extend into the horizontal pipe beyond the inside surface of the bottom of the

pipe; and
005.03 When the pipeline water flow stops, the drain will automatically open. A tube, pipe or similar conduit shall be used to discharge the solution at least twenty feet from the irrigation water source.

006 Chemical injection line check valve. The chemical injection line check valve shall be located between the point of chemical injection into the irrigation pipeline and the chemical injection pump. Its purpose is to prevent flow of water from the irrigation system into the chemical supply tank and to prevent gravity flow from the chemical supply tank into the irrigation pipeline.

006.01 The valve shall be constructed of chemically resistant materials;
006.02 The valve shall be designed to prevent irrigation water under operating pressure from entering the chemical injection line; and
006.03 The valve shall be designed to have a minimum opening (cracking) pressure of ten psi. When the chemical injection pump is shut down, the valve shall prevent any leakage from the chemical supply tank.
006.04 As an alternative to the minimum opening pressure requirement in 006.03 above, a vacuum relief valve may be placed in the injection line between the chemical injection line check valve and chemical injection pump. The vacuum relief valve shall be constructed of chemically resistant materials, shall open at atmospheric pressure, shall be at an elevation greater than the highest part of the chemical supply tank and shall also be the highest point in the injection line.

007 Simultaneous interlock device. The irrigation pumping plant and the chemical injection pump shall be interlocked so that if the pumping plant stops, the injection pump will also stop. Its purpose is to prevent pumping chemicals into the irrigation pipeline after the irrigation pump stops.

Enabling Legislation: Neb. Rev. Stat. §§ 46-1127, 46-1136(1)

Legal Citation: Title 195, Ch. 9, Nebraska Department of Environmental Control

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